

SOURCE INVENTORY

CATEGORY # 95 - 97

ASPHALT PAVING

1999 EMISSIONS

Introduction

Road Oils, Hot Mix Asphalt, and Emulsified Asphalt, Categories 95 –97, respectively, account for the organic emissions from asphalt paving materials during and after the paving of roads, streets, parking lots in the Bay Area. Cutback asphalt is (Category # 94) no longer used in the Bay Area.

Methodology

Asphalt consumption of hot mix asphalt, road oil, and emulsified asphalt in California for 1999 was obtained from the Asphalt Institute. (The latest figures were from 1997, and then grown to 1999 values using the Association of Bay Area Government's (ABAG) "Projection 98" Transportation, Communication, and Utility Employment growth profile.) The amount of asphalt usage in the Bay Area is estimated by applying the ratio of road miles in the Bay Area to the road miles in the State. Emission factors for VOC in the asphalt are taken from the Air Resources Board report. The asphalt consumption is distributed to the Bay Area counties according to the mileage maintained for public roads in each county taken from the 1996 California Statistical Abstract published by Department of Finance. The total emissions for area source categories are determined by multiplying the emission factor, rule effectiveness factor and throughput.

Monthly Variation

Monthly variation of emissions is based on estimates of construction activities in a year.

County Distribution

Emissions distributed into the nine counties are based on miles of public roads maintained in each county taken from the California Statistical Abstract.

TRENDS

History

From 1979 through 1980, the asphalt emissions were estimated based on the asphalt sale data from the U.S. Department of Energy and ARB emission factors. Since 1981, the Asphalt Institute has done the reporting of asphalt sales and road oils.

Growth

Projections from 1960 to 2010 are based on District data (from 1990 -1996) and growth profiles created by ABAG's "Projection 98" Transportation, Communication, and Utility Employment growth profile.

Control

Due to Rule 8-15, there is no longer any usage of cutback asphalt in the Bay Area by 1982. The emissions from road oil category were reduced by 70% in 1988 and 97% in 1989. Similarly, emissions from using emulsified asphalt were reduced by 50% in 1988 and 70% by 1989.